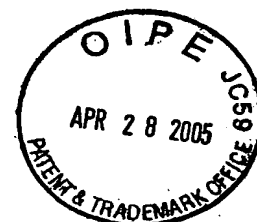


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<110> Perrault, Claude  
McBride, Kevin

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Leu Arg Asp Arg Leu Thr Lys Gln Glu Phe Gln Thr Leu Phe Phe Leu  
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Gly Val Ser Leu Ala Ala Gly Ala Val Phe Leu Ser Val Ile Tyr Leu  
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Thr Tyr Thr Gly Tyr Ile Ala Pro Trp Ser Gly Arg Phe Tyr Ser Leu  
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Trp Asp Thr Gly Tyr Ala Lys Ile His Ile Pro Ile Ile Ala Ser Val  
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Glu Gly Asp Tyr Phe Thr Gln Gln Gly Glu Phe Arg Val Asp Lys Ala  
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Gly Ser Pro Thr Leu Leu Asn Cys Leu Met Tyr Lys Met Ser Tyr Tyr  
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Arg Phe Gly Glu Met Gln Leu Asp Phe Arg Thr Pro Pro Gly Phe Asp  
725 730 735

Arg Thr Arg Asn Ala Glu Ile Gly Asn Lys Asp Ile Lys Phe Lys His  
740 745 750

Leu Glu Glu Ala Phe Thr Ser Glu His Trp Leu Val Arg Ile Tyr Lys  
755 760 765

Val Lys Ala Pro Asp Asn Arg Glu Thr Leu Gly His Lys Pro Arg Val  
770 775 780

Thr Asn Ile Val Pro Lys Gln Lys Tyr Leu Ser Lys Lys Thr Thr Lys  
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Trp Phe Asn Tyr Arg Ala Thr Lys Tyr Leu Val Asn Asn Ser Phe Tyr  
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Lys Phe Leu Asn Trp Phe Asp Asp Arg Thr Trp Tyr Pro Leu Gly Arg  
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Val Thr Gly Gly Thr Leu Tyr Pro Gly Leu Met Thr Thr Ser Ala Phe  
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Ile Trp His Ala Leu Arg Asn Trp Leu Gly Leu Pro Ile Asp Ile Arg  
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Asn Val Cys Val Leu Phe Ala Pro Leu Phe Ser Gly Val Thr Ala Trp  
 115 120 125

Ala Thr Tyr Glu Phe Thr Lys Glu Ile Lys Asp Ala Ser Ala Gly Leu  
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Leu Ala Ala Gly Phe Ile Ala Ile Val Pro Gly Tyr Ile Ser Arg Ser  
 145 150 155 160

Val Ala Gly Ser Tyr Asp Asn Glu Ala Ile Ala Ile Thr Leu Leu Met  
 165 170 175

Val Thr Phe Met Phe Trp Ile Lys Ala Gln Lys Thr Gly Ser Ile Met  
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His Ala Thr Cys Ala Ala Leu Phe Tyr Phe Tyr Met Val Ser Ala Trp  
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Gly Gly Tyr Val Phe Ile Thr Asn Leu Ile Pro Leu His Val Phe Leu  
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Leu Ile Leu Met Gly Arg Tyr Ser Ser Lys Leu Tyr Ser Ala Tyr Thr  
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Thr Trp Tyr Ala Ile Gly Thr Val Ala Ser Met Gln Ile Pro Phe Val  
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Phe Gly Leu Ile Gln Ile Val Ala Phe Gly Asp Phe Val Lys Gly Gln  
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Ile Ser Thr Ala Lys Phe Lys Val Ile Met Met Val Ser Leu Phe Leu  
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Ile Leu Val Leu Gly Val Val Gly Leu Ser Ala Leu Thr Tyr Met Gly  
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Leu Ile Ala Pro Trp Thr Gly Arg Phe Tyr Ser Leu Trp Asp Thr Asn  
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Tyr Ala Lys Ile His Ile Pro Ile Ile Ala Ser Val Ser Glu His Gln



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His Val Phe Val Ile Ala Tyr Ser Val Leu Cys Ser Tyr Phe Ala Gly 385 390 395 400		
Val Met Val Arg Leu Met Leu Thr Leu Thr Pro Val Ile Cys Val Ser 405 410 415		
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Val Ala Ala Trp Trp Asp Tyr Gly Tyr Gln Ile Gly Gly Met Ala Asp 515 520 525		
Arg Thr Thr Leu Val Asp Asn Asn Thr Trp Asn Asn Thr His Ile Ala 530 535 540		
Ile Val Gly Lys Ala Met Ala Ser Pro Glu Glu Lys Ser Tyr Glu Ile 545 550 555 560		
Leu Lys Glu His Asp Val Asp Tyr Val Leu Val Ile Phe Gly Gly Leu 565 570 575		
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Ile Ser Glu Gly Ile Trp Pro Glu Glu Ile Lys Glu Arg Tyr Phe Tyr  
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Thr Ala Glu Gly Glu Tyr Arg Val Asp Ala Arg Ala Ser Glu Thr Met  
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Arg Asn Ser Leu Leu Tyr Lys Met Ser Tyr Lys Asp Phe Pro Gln Leu  
625 630 635 640

Phe Asn Gly Gly Gln Ala Thr Asp Arg Val Arg Gln Gln Met Ile Thr  
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Pro Leu Asp Val Pro Pro Leu Asp Tyr Phe Asp Glu Val Phe Thr Ser  
660 665 670

Glu Asn Trp Met Val Arg Ile Tyr Gln Leu Lys Lys Asp Asp Ala Gln  
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Phe Asp Pro Trp Phe Asn Tyr Arg Ala Thr Ala Tyr Met Val Gln Asn  
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Gly Trp Tyr Asn Phe Leu Asn Trp Phe Asp Glu Arg Ala Trp Tyr Pro  
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Leu Gly Arg Ile Val Gly Gly Thr Val Tyr Pro Gly Leu Met Ile Thr  
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Ser Gly Gly Ile His Trp Leu Leu His Val Leu Asn Ile Pro Val His  
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Ile Arg Asp Ile Cys Val Phe Leu Ala Pro Ile Phe Ser Gly Leu Thr  
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Ser Ile Ser Thr Tyr Leu Leu Thr Lys Glu Leu Trp Ser Ala Gly Ala  
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Gly Leu Phe Ala Ala Ser Phe Ile Ala Ile Val Pro Gly Tyr Ile Ser  
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Arg Ser Val Ala Gly Ser Tyr Asp Asn Glu Gly Ile Ala Ile Phe Ala  
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Leu Gln Phe Thr Tyr Phe Leu Trp Val Arg Ser Val Lys Thr Gly Ser  
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Val Phe Trp Ser Ala Ala Ala Ala Leu Ser Tyr Phe Tyr Met Val Ser  
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Ala Trp Gly Gly Tyr Val Phe Ile Ile Asn Leu Ile Pro Leu His Val  
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Phe Val Leu Leu Ile Met Gly Arg Tyr Ser Pro Arg Leu Leu Thr Ser  
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Tyr Ser Thr Phe Tyr Ile Leu Gly Leu Leu Phe Ser Met Gln Ile Pro  
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Phe Val Gly Phe Gln Pro Ile Arg Thr Ser Glu His Met Ala Ala Leu  
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Gly Val Phe Val Leu Leu Met Ala Val Ala Thr Leu Arg His Leu Gln  
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Ser Val Leu Ser Arg Asn Glu Phe Arg Lys Leu Phe Ile Val Gly Gly  
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Thr Gly Tyr Ala Lys Ile His Ile Pro Ile Ile Ala Ser Val Ser Glu  
 340 345 350

His Gln Pro Thr Thr Trp Phe Ser Phe Phe Phe Asp Leu His Ile Leu  
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Val Cys Ala Phe Pro Val Gly Val Trp Tyr Cys Ile Lys Gln Ile Asn  
 370 375 380

Asp Glu Arg Val Phe Val Val Leu Tyr Ala Ile Ser Ala Val Tyr Phe  
 385 390 395 400

Ala Gly Val Met Val Arg Leu Met Leu Thr Leu Thr Pro Val Val Cys  
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Met Leu Ala Gly Val Ala Phe Ser Gly Leu Leu Asp Val Phe Leu Gln  
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Glu Asp Ser Ser Lys Arg Met Gly Thr Ala Ile Ser Ala Ala Thr Glu  
435 440 445

Val Asp Glu Ala Glu Asp Ser Ile Glu Lys Lys Thr Leu Tyr Asp Lys  
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Ala Gly Lys Leu Lys His Arg Thr Lys His Asp Ala Gln Gln Asp Thr  
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Gly Val Ser Ser Asn Leu Lys Ser Ile Val Ile Leu Ala Val Leu Met  
485 490 495

Leu Leu Met Met Phe Ala Val His Cys Thr Trp Val Thr Ser Asn Ala  
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Tyr Ser Ser Pro Ser Ile Val Leu Ala Phe His Asn Ser Gln Asp Gly  
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Gln Asn Thr Ala Asp Asp Ala Arg Val Met Ser Trp Trp Asp Tyr Gly  
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Asn Lys Phe Leu Trp Met Val Arg Ile Ala Glu Gly Glu His Pro Lys  
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Asp Ile Lys Glu Ser Asp Tyr Phe Thr Asp Arg Gly Glu Phe Arg Val  
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Asp Ala Glu Gly Ala Pro Ala Leu Leu Asn Cys Leu Met Tyr Lys Leu

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 Thr Lys Glu Arg Thr Ile Pro Pro Ala Asn Phe Ile Ser Arg Lys Asn  
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Thr Arg Leu Phe Ala Val Leu Arg Phe Glu Ser Val Ile His Glu Phe
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Asp Pro Tyr Phe Asn Tyr Arg Thr Thr Arg Phe Leu Ala Glu Glu Gly
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Phe Tyr Lys Phe His Asn Trp Phe Asp Asp Arg Ala Trp Tyr Pro Leu
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Gly Arg Ile Ile Gly Gly Thr Ile Tyr Pro Gly Leu Met Ile Thr Ser
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Arg Asn Val Cys Val Phe Leu Ala Pro Leu Phe Ser Ser Phe Thr Thr  
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Ile Val Thr Tyr His Leu Thr Lys Glu Leu Lys Asp Ala Gly Ala Gly  
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Leu Leu Ala Ala Ala Met Ile Ala Val Val Pro Gly Tyr Ile Ser Arg  
 145 150 155 160

Ser Val Ala Gly Ser Tyr Asp Asn Glu Gly Ile Ala Ile Phe Cys Met  
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Leu Leu Thr Tyr Tyr Met Trp Ile Lys Ala Val Lys Thr Gly Ser Ile  
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Tyr Trp Ala Ala Lys Cys Ala Leu Ala Tyr Phe Tyr Met Val Ser Ser  
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Trp Gly Gly Tyr Val Phe Leu Ile Asn Leu Ile Pro Leu His Val Leu  
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Val Leu Met Leu Thr Gly Arg Phe Ser His Arg Ile Tyr Val Ala Tyr  
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Cys Thr Val Tyr Cys Leu Gly Thr Ile Leu Ser Met Gln Ile Ser Phe  
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Val Gly Phe Gln Pro Val Leu Ser Ser Glu His Met Ala Ala Phe Gly  
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Val Phe Gly Leu Cys Gln Ile His Ala Phe Val Asp Tyr Leu Arg Ser  
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Lys Leu Asn Pro Gln Gln Phe Glu Val Leu Phe Arg Ser Val Ile Ser  
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Gly Lys Ile Ser Pro Trp Thr Gly Arg Phe Tyr Ser Leu Leu Asp Pro  
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Ser Tyr Ala Lys Asn Asn Ile Pro Ile Ile Ala Ser Val Ser Glu His  
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Gln Pro Thr Thr Trp Ser Ser Tyr Tyr Phe Asp Leu Gln Leu Leu Val  
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Phe Met Phe Pro Val Gly Leu Tyr Tyr Cys Phe Ser Asn Leu Ser Asp  
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Ala Arg Ile Phe Ile Ile Met Tyr Gly Val Thr Ser Met Tyr Phe Ser  
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Ala Val Met Val Arg Leu Met Leu Val Leu Ala Pro Val Met Cys Ile  
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Leu Ser Gly Ile Gly Val Ser Gln Val Leu Ser Thr Tyr Met Lys Asn  
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Leu Asp Ile Ser Arg Pro Asp Lys Lys Ser Lys Lys Gln Gln Asp Ser  
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Thr Tyr Pro Ile Lys Asn Glu Val Ala Ser Gly Met Ile Leu Val Met  
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Glu Ala Tyr Ser Ser Pro Ser Ile Val Leu Ser Ala Arg Gly Gly Asp  
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Gly Ser Arg Ile Ile Phe Asp Asp Phe Arg Glu Ala Tyr Tyr Trp Leu  
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Arg His Asn Thr Pro Glu Asp Ala Lys Val Met Ser Trp Trp Asp Tyr  
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Gly Tyr Gln Ile Thr Ala Met Ala Asn Arg Thr Ile Leu Val Asp Asn  
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Asn Thr Trp Asn Asn Thr His Ile Ser Arg Val Gly Gln Ala Met Ala  
 545 550 555 560

Ser Thr Glu Glu Lys Ala Tyr Glu Ile Met Arg Glu Leu Asp Val Ser  
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Tyr Val Leu Val Ile Phe Gly Gly Leu Thr Gly Tyr Ser Ser Asp Asp  
580 585 590

Ile Asn Lys Phe Leu Trp Met Val Arg Ile Gly Gly Ser Thr Glu Thr  
595 600 605

Gly Arg His Ile Lys Glu Asn Asp Tyr Tyr Thr Pro Thr Gly Glu Phe  
610 615 620

Arg Val Asp Arg Glu Gly Ser Pro Val Leu Leu Asn Cys Leu Met Tyr  
625 630 635 640

Lys Met Cys Tyr Tyr Arg Phe Gly Gln Val Tyr Thr Glu Ala Lys Arg  
645 650 655

Pro Pro Gly Phe Asp Arg Val Arg Asn Ala Glu Ile Gly Asn Lys Asp  
660 665 670

Phe Glu Leu Asp Val Leu Glu Glu Ala Tyr Thr Thr Glu His Trp Leu  
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Thr Arg Leu Phe Ala Val Leu Arg Phe Glu Ser Val Ile His Glu Phe  
35 40 45

Asp Pro Tyr Phe Asn Tyr Arg Thr Thr Arg Phe Leu Ala Glu Glu Gly  
50 55 60

Phe Tyr Lys Phe His Asn Trp Phe Asp Asp Arg Ala Trp Tyr Pro Leu  
65 70 75 80

Gly Arg Ile Ile Gly Gly Thr Ile Tyr Pro Gly Leu Met Ile Thr Ser  
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Ala Ala Ile Tyr His Val Leu His Phe Phe His Ile Thr Ile Asp Ile  
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Arg Asn Val Cys Val Phe Leu Ala Pro Leu Phe Ser Ser Phe Thr Ser  
115 120 125

Ile Val Thr Tyr Leu Leu Thr Lys Glu Leu Lys Asp Ala Gly Ala Gly  
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Leu Leu Ala Ala Ala Met Ile Ala Val Val Pro Gly Tyr Ile Ser Arg  
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Ser Val Ala Gly Ser Tyr Asp Asn Glu Gly Ile Ala Ile Phe Cys Met  
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Leu Leu Thr Tyr Tyr Met Trp Ile Lys Ala Val Lys Thr Gly Ser Ile  
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Cys Trp Ala Ala Lys Cys Ala Leu Ala Tyr Phe Tyr Met Val Ser Ser  
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Trp Gly Gly Tyr Val Phe Leu Ile Asn Leu Ile Pro Leu His Val Leu  
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Val Leu Met Leu Thr Gly Arg Phe Ser His Arg Ile Tyr Val Ala Tyr  
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Cys Thr Val Tyr Cys Leu Gly Thr Ile Leu Ser Arg Gln Ile Ser Phe  
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Val Gly Phe Gln Pro Val Leu Ser Ser Glu His Met Ala Gly Phe Gly  
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Val Phe Gly Leu Cys Gln Ile His Ala Phe Val Asp Tyr Leu Arg Ser  
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Lys Leu Asn Pro Gln Gln Phe Glu Val Leu Phe Arg Ser Val Ile Ser  
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Leu Val Gly Phe Val Leu Leu Thr Val Gly Ala Leu Leu Met Leu Thr  
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Gly Lys Ile Ser Pro Trp Thr Gly Arg Phe Tyr Ser Leu Leu Asp Pro  
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Gln Pro Thr Thr Trp Ser Ser Tyr Tyr Phe Asp Leu Gln Leu Leu Val  
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 Ser Thr Glu Glu Lys Ala Tyr Glu Ile Met Arg Glu Leu Asp Val Ser  
 565 570 575  
 Tyr Val Leu Val Ile Phe Gly Gly Leu Thr Gly Tyr Ser Ser Asp Asp  
 580 585 590  
 Ile Asn Lys Phe Leu Trp Met Val Arg Ile Gly Gly Ser Thr Asp Thr  
 595 600 605  
 Gly Lys His Ile Lys Glu Asn Asp Tyr Tyr Thr Pro Thr Gly Glu Phe  
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 Arg Val Asp Arg Glu Gly Ser Pro Val Leu Leu Asn Cys Leu Met Tyr  
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 Lys Met Cys Tyr Tyr Arg Phe Gly Gln Val Tyr Thr Glu Ala Lys Arg



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Phe Glu Leu Asp Val Leu Glu Glu Gly Tyr Thr Thr Glu His Trp Leu		
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Phe Ala Ser Arg Leu Phe Ala Ile Val Arg Phe Glu Ser Ile Ile His		
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Glu Phe Asp Pro Trp Phe Asn Tyr Arg Ala Thr His His Met Val Gln		
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His Gly Phe Tyr Lys Phe Leu Asn Trp Phe Asp Glu Arg Ala Trp Tyr		
65	70	80
Pro Leu Gly Arg Ile Val Gly Gly Thr Val Tyr Pro Gly Leu Met Val		
85	90	95
Thr Ser Gly Leu Ile His Trp Ile Leu Asp Ser Leu Asn Phe His Val		
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His Ile Arg Glu Val Cys Val Phe Leu Ala Pro Thr Phe Ser Gly Leu		

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Thr Ala Ile Ala Thr Tyr Leu Leu Thr Lys Glu Leu Trp Ser Pro Gly				
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Ala Gly Leu Phe Ala Ala Cys Phe Ile Ala Ile Ser Pro Gly Tyr Thr				
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Ser Arg Ser Val Ala Gly Ser Tyr Asp Asn Glu Gly Ile Ala Ile Phe				
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Ala Leu Gln Phe Thr Tyr Tyr Leu Trp Val Lys Ser Leu Lys Thr Gly				
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Ser Ile Met Trp Ala Ser Leu Cys Ala Leu Ser Tyr Phe Tyr Met Val				
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Ala Leu Ala Leu Ile Ile Met Gly Arg Tyr Ser Ser Arg Leu Phe Val				
225		230		235
Ser Tyr Thr Ser Phe Tyr Cys Leu Ala Thr Ile Leu Ser Met Gln Val				
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Pro Phe Val Gly Phe Gln Pro Val Arg Thr Ser Glu His Met Pro Ala				
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Phe Gly Val Phe Gly Leu Leu Gln Ile Val Ala Leu Met His Tyr Ala				
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Arg Asn Arg Ile Thr Arg Gln Gln Phe Met Thr Leu Phe Val Gly Gly				
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Leu Thr Ile Leu Gly Ala Leu Ser Val Val Val Tyr Phe Ala Leu Val				
305		310		315
Trp Gly Gly Tyr Val Ala Pro Phe Ser Gly Arg Phe Tyr Ser Leu Trp				
		325		330
Asp Thr Gly Tyr Ala Lys Ile His Ile Pro Ile Ile Ala Ser Val Ser				
		340		345
Glu His Gln Pro Thr Thr Trp Val Ser Phe Phe Phe Asp Leu His Ile				
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Thr Ala Ala Val Phe Pro Val Gly Leu Trp Tyr Cys Ile Lys Lys Val  
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Asn Asp Glu Arg Val Phe Ile Ile Leu Tyr Ala Val Ser Ala Val Tyr  
 385 390 395 400

Phe Ala Gly Val Met Val Arg Leu Met Leu Thr Leu Thr Pro Ala Val  
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Cys Val Leu Ala Gly Ile Gly Phe Ser Tyr Thr Phe Glu Lys Tyr Leu  
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Lys Asp Glu Glu Thr Lys Glu Arg Ser Ser Ser Gln Ser Gly Thr Thr  
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Lys Asp Glu Lys Leu Tyr Asp Lys Ala Ala Lys Asn Val Lys Ser Arg  
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Ala Thr Tyr Val Thr Ser Asn Ala Tyr Ser His Pro Ser Val Val Leu  
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Glu Ala Tyr His Trp Leu Arg Glu Asn Thr Ala Asp Asp Ala Arg Val  
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Thr Thr Leu Val Asp Asn Asn Thr Trp Asn Asn Ser His Ile Ala Leu  
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Val Gly Lys Ala Met Ser Ser Asn Glu Ser Ala Ala Tyr Glu Ile Met  
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Thr Glu Leu Asp Val Asp Tyr Ile Leu Val Ile Phe Gly Gly Val Ile  
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Gly Tyr Ser Gly Asp Asp Ile Asn Lys Phe Leu Trp Met Val Arg Ile  
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Val Gly Tyr Asn Gln Ala Gly Gly Phe Asp Arg Thr Arg Gly Tyr Val  
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Ile Gly Lys Lys Asp Ile Thr Leu Glu Tyr Ile Glu Glu Ala Tyr Thr  
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Thr Glu Asn Trp Leu Val Arg Ile Tyr Lys Arg Lys Lys Leu Pro Asn  
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Arg Pro Thr Val Lys Ser Glu Glu Ala Thr Ile Pro Ile Lys Gly Lys  
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His	Pro	Lys	Asp	Ile	Arg	Glu	Ser	Asp	Tyr
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